03/5



OTPE

ENTERED

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/082,014

DATE: 03/13/2002 P.5

TIME: 15:15:02

#2.

Input Set : A:\ICC130.ST25.txt

Output Set: N:\CRF3\03132002\J082014.raw

- 3 <110> APPLICANT: Birkett, Ashley J.
- 5 < 120 > TITLE OF INVENTION: IMMUNOGENIC HBc CHIMER PARTICLES STABILIZED WITH AN N-TERMINAL CYSTEINE
 - 7 <130> FILE REFERENCE: ICC-130.0 4564/85124
- C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/082,014
- C--> 10 <141> CURRENT FILING DATE: 2002-02-22
 - 12 <150> PRIOR APPLICATION NUMBER: 09/930,915
 - 13 <151> PRIOR FILING DATE: 2001-08-15
 - 15 <160> NUMBER OF SEQ ID NOS: 290
 - 17 <170> SOFTWARE: PatentIn version 3.1
 - 19 <210> SEQ ID NO: 1
 - 20 <211> LENGTH: 183
 - 21 <212> TYPE: PRT
 - 22 <213> ORGANISM: Hepatitis B virus
 - 24 <400> SEQUENCE: 1
 - 26 Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
 - 7 1 5 10
 - 30 Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
 - 1 20 25
 - 34 Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
 - 35 35 40
 - 38 Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
 - 39 50 55
 - 42 Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala
 - 3 65 70 75
 - 46 Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys
 - 47 85 90
 - 50 Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
 - 51 100 105 110
 - 54 Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
 - 55 115 120 125
 - 58 Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
 - 59 130 135 140
 - 62 Glu Thr Thr Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr
 - i3 145 150 155
 - 66 Pro Ser Pro Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Ser 67 165 170 175
 - 70 Gln Ser Arg Glu Ser Gln Cys
 - 71 180
 - 74 <210> SEQ ID NO: 2
 - 75 <211> LENGTH: 185
 - 76 <212> TYPE: PRT
 - 77 <213> ORGANISM: Hepatitis B virus
 - 79 <400> SEQUENCE: 2



PATENT APPLICATION: US/10/082,014

DATE: 03/13/2002 TIME: 15:15:02

Input Set : A:\ICC130.ST25.txt

Output Set: N:\CRF3\03132002\J082014.raw

81 Met Asp 1 82 1	le Asp	Pro '	Tyr	Lys (Glu		Gly 10	Ala	Thr	Val	Glu	Leu 15	Leu
85 Ser Phe I 86	eu Pro	-	Asp	Phe	Phe			Val	Arg	Asp	Leu 30	Leu	Asp
89 Thr Ala S		Leu '	Tyr .		Glu 40		Leu	Glu	Ser	Pro 45		His	Cys
93 Ser Pro E 94 50		Thr				Gln	Ala	Ile	Leu 60	Cys	Trp	Gly	Glu
97 Leu Met T 98 65	hr Leu		Thr 70	Trp	Val	Gly	Asn	Asn 75	Leu	Gln	Asp	Pro	Ala 80
101 Ser Arg 102	Asp Leu	Val 85	Val	Asn	Tyr	Val	Asn 90	Thr	Asn	Met	: Gl	Leu 95	Lys
105 Ile Arg 106	Gln Leu 100		Trp	Phe	His	11e		Cys	Leu	Thi	Phe 1110		Arg
109 Glu Thr 110	Val Leu 115	Glu	Tyr	Leu	Val 120		Phe	e Gly	val	Trp 125		e Arg	Thr
113 Pro Pro 114 130	Ala Tyr	Arg	Pro	Pro 135		Ala	Pro	ıl€	Leu 140		Thi	. Leu	Pro
117 Glu Thr 118 145			150					155	5				160
121 Arg Thr 122	Pro Ser	Pro 165		Arg	Arg	Arg	Ser 170		ı Ser	Pro	Arg	175	
125 Arg Ser 126	Gln Ser 180		Glu	Ser	Gln	Cys 185							
129 <210> SE	EQ ID NO	: 3											
130 <211> LF													
131 <212> TY	(PE: PRI	•											
	CANTOM.	Hon	a + i +	ic D	77 i r	111 6							
132 <213> OF		. *	atit	is B	vir	rus							
134 <400> SE	EQUENCE:	3					. Gly	, Ala	a Thr	· Val	l Glu	ı Leu	Leu
134 <400> SE 136 Met Asp 137 1	EQUENCE: Ile Asp	3 Pro 5	Tyr	Lys	Glu	ı Phe	10					15	
134 <400> SE 136 Met Asp 137 1 140 Ser Phe 141	EQUENCE: Ile Asp Leu Pro 20	3 Pro 5 Ser	Tyr Asp	Lys Phe	Glu	Phe Pro 25	10 Ser	· Val	L Arg	, Ası	Let 30	15 ı Leu	Asp
134 <400> SI 136 Met Asp 137 1 140 Ser Phe 141 144 Thr Ala 145	EQUENCE: Ile Asp Leu Pro 20 Ser Ala 35	3 Pro 5 Ser	Tyr Asp Tyr	Lys Phe Arg	Glu Phe Glu 40	Phe Pro 25 Ala	10 Ser	Val	l Arg	Ası Pro 45	Let 30 Glu	15 Leu His	Asp Cys
134 <400> SI 136 Met Asp 137 1 140 Ser Phe 141 144 Thr Ala 145 148 Ser Pro 149 50	EQUENCE: Ile Asp Leu Pro 20 Ser Ala 35 His His	3 Pro 5 Ser Leu	Tyr Asp Tyr Ala	Lys Phe Arg Leu 55	Glu Phe Glu 40 Arg	Phe Pro 25 Ala	10 Ser Leu	Val	L Arg	Ası Pro 45 Cys	D Let 30 D Glu	15 Leu His Gly	Asp Cys
134 <400> SE 136 Met Asp 137 1 140 Ser Phe 141 144 Thr Ala 145 148 Ser Pro 149 50 152 Leu Met 153 65	EQUENCE: Ile Asp Leu Pro 20 Ser Ala 35 His His	3 Pro 5 Ser Leu Thr	Tyr Asp Tyr Ala Thr	Lys Phe Arg Leu 55 Trp	Glu Phe Glu 40 Arg	Phe Pro 25 Ala Glm	10 Ser Leu Ala Asr	Val Glu Ile Asr 75	l Arg 1 Sen 2 Leu 60 1 Leu	Ası Pro 45 Cys	Det 30 Clu Trp 1 Asp	15 Levi His Gly	Asp Cys Glu Ala 80
134 <400> SE 136 Met Asp 137 1 140 Ser Phe 141 144 Thr Ala 145 148 Ser Pro 149 50 152 Leu Met 153 65 156 Ser Arg	EQUENCE: Ile Asp Leu Pro 20 Ser Ala 35 His His	3 Pro 5 Ser Leu Thr Ala	Tyr Asp Tyr Ala Thr	Lys Phe Arg Leu 55 Trp	Glu Phe Glu 40 Arg	Phe Pro 25 Ala Glm	10 Ser Leu Ala Asr	Val Glu Ile Asr 75	l Arg 1 Sen 2 Leu 60 1 Leu	Ası Pro 45 Cys	Det 30 Clu Trp 1 Asp	15 Leu His OGly Pro	Asp Cys Glu Ala 80
134 <400> SE 136 Met Asp 137 1 140 Ser Phe 141 144 Thr Ala 145 148 Ser Pro 149 50 152 Leu Met 153 65	EQUENCE: Ile Asp Leu Pro 20 Ser Ala 35 His His Thr Leu Asp Leu	3 Pro 5 Ser Leu Thr Ala Val 85	Tyr Asp Tyr Ala Thr 70 Val	Lys Arg Leu 55 Trp Asn	Glu Phe Glu 40 Arg Val	Phe Pro 25 Ala Glm Gly Val	10 Ser Leu Ala Asn 90 Ser	Value Glue Glue Glue Glue Glue Glue Glue G	L Arg	Pro 45 Cys Glu	December 1995 Level 19	15 Leu 1 His 2 Gly 2 Pro 4 Leu 95 Gly	Asp Cys Glu Ala 80 Lys
134 <400> SI 136 Met Asp 137 1 140 Ser Phe 141 144 Thr Ala 145 148 Ser Pro 149 50 152 Leu Met 153 65 156 Ser Arg 157 160 Ile Arg 161	EQUENCE: Ile Asp Leu Pro 20 Ser Ala 35 His His Thr Leu Asp Leu Gln Leu 100	3 Pro 5 Ser Leu Thr Ala Val 85 Leu	Tyr Asp Tyr Ala Thr 70 Val	Lys Phe Arg Leu 55 Trp Asn	Glu Phe Glu 40 Arg Val Tyr	Phe Pro 25 Ala Glm Gly Val	10 Ser Leu Ala Asn 90 Ser	Value Glue Glue Glue Glue Glue Glue Glue G	L Arg	Asp Pro 45 Cys Glu Val	D Let 30 Glus Trp Asp L Gly Phe 110	15 Leu 1 His 2 Gly 2 Pro 4 Leu 95 Gly	Asp Cys Glu Ala 80 Lys
134 <400> SE 136 Met Asp 137 1 140 Ser Phe 141 144 Thr Ala 145 148 Ser Pro 149 50 152 Leu Met 153 65 156 Ser Arg 157 160 Ile Arg 161 164 Glu Thr 165	EQUENCE: Ile Asp Leu Pro 20 Ser Ala 35 His His Thr Leu Asp Leu 100 Val Leu 115	3 Pro 5 Ser Leu Hala Ala Val 85 Leu Glu	Tyr Asp Tyr Ala Thr 70 Val Trp	Lys Phe Arg Leu 55 Trp Asn Phe	Glu Phe Glu 40 Arg Val Tyr His	Phe Pro 25 Ala Glm Gly Val Sile 105 Ser	10 Ser Leu Ala Asn 90 Ser Phe	Value Glue Asra 75 This Cys	L Arg	Pro 45 Cys Glu Val Thi	D Lev 30 D Glv S Trp 1 Asp 1 Gly T Phe 110 D Ile	15 1 Leu 1 His 2 Gly 2 Pro 4 Leu 95 2 Gly 3 Arg	Asp Cys Glu Ala 80 Lys Arg
134 <400> SI 136 Met Asp 137 1 140 Ser Phe 141 144 Thr Ala 145 148 Ser Pro 149 50 152 Leu Met 153 65 156 Ser Arg 157 160 Ile Arg 161 164 Glu Thr 165 168 Pro Pro	EQUENCE: Ile Asp Leu Pro 20 Ser Ala 35 His His Thr Leu Asp Leu 100 Val Leu 115	3 Pro 5 Ser Leu Hala Ala Val 85 Leu Glu	Tyr Asp Tyr Ala Thr 70 Val Trp	Lys Phe Arg Leu 55 Trp Asn Phe Leu Pro	Glu Phe Glu 40 Arg Val Tyr His Val 120 Asr	Phe Pro 25 Ala Glm Gly Val Sile 105 Ser	10 Ser Leu Ala Asn 90 Ser Phe	Value Glue Asra 75 This Cys	L Arg	ASP ASP ASP ASP ASP ASP ASP ASP ASP ASP	D Lev 30 D Glv S Trp 1 Asp 1 Gly T Phe 110 D Ile	15 1 Leu 1 His 2 Gly 2 Pro 4 Leu 95 2 Gly 3 Arg	Asp Cys Glu Ala 80 Lys Arg
134 <400> SI 136 Met Asp 137 1 140 Ser Phe 141 144 Thr Ala 145 148 Ser Pro 149 50 152 Leu Met 153 65 156 Ser Arg 157 160 Ile Arg 161 164 Glu Thr 165 168 Pro Pro 169 130	EQUENCE: Ile Asp Leu Pro 20 Ser Ala 35 His His Thr Leu Asp Leu 100 Val Leu 115 Ala Tyr	3 Pro 5 Ser Leu Ala Val 85 Leu Glu Arg	Tyr Asp Tyr Ala Thr 70 Val Trp Tyr	Lys Phe Arg Leu 55 Trp Asn Phe Leu Pro 135	Glu Phe Glu 40 Arg Val Tyr His Val 120 Asr	Phe Pro 25 Ala Gly Val Sile 105 Ser	10 Ser Leu Ala Asn 90 Ser Phe	Value Glue Asra 75 a Thu	L Arg	ASP ASP ASP ASP ASP ASP ASP ASP ASP ASP	D Lev 30 D Glv S Trp 1 Asp 1 Gly C Phe 11(D Ile 5	15 1 Leu 1 His 2 Gly 2 Pro 4 Leu 95 6 Gly 2 Leu 2 The Leu 2 The Leu 3 The Leu 4 Leu 4 The Leu 4	Asp Cys Glu Ala 80 Lys Arg Thr
134 <400> SI 136 Met Asp 137 1 140 Ser Phe 141 144 Thr Ala 145 148 Ser Pro 149 50 152 Leu Met 153 65 156 Ser Arg 157 160 Ile Arg 161 164 Glu Thr 165 168 Pro Pro	EQUENCE: Ile Asp Leu Pro 20 Ser Ala 35 His His Thr Leu Asp Leu 100 Val Leu 115 Ala Tyr	3 Pro 5 Ser Leu Ala Val 85 Leu Glu Arg	Tyr Asp Tyr Ala Thr 70 Val Trp Tyr	Lys Phe Arg Leu 55 Trp Asn Phe Leu Pro 135 Arg	Glu Phe Glu 40 Arg Val Tyr His Val 120 Asr	Phe Pro 25 Ala Gly Val Sile 105 Ser	10 Ser Leu Ala Asn 90 Ser Phe	Value Glue Asra 75 a Thu	L Arg	ASP ASP ASP ASP ASP ASP ASP ASP ASP ASP	D Lev 30 D Glv S Trp 1 Asp 1 Gly C Phe 11(D Ile 5	15 1 Leu 1 His 2 Gly 2 Pro 4 Leu 95 6 Gly 2 Leu 2 The Leu 2 The Leu 3 The Leu 4 Leu 4 The Leu 4	Asp Cys Glu Ala 80 Lys Arg Thr



PATENT APPLICATION: US/10/082,014 TIME: 15:15:02

DATE: 03/13/2002

Input Set : A:\ICC130.ST25.txt

Output Set: N:\CRF3\03132002\J082014.raw

176 Arg Thr Pro Ser Pro Arg Arg Pro Ser Gln Ser Pro Arg Arg 165 180 Arg Ser Gln Ser Arg Glu Ser Gln Cys 181 180 184 <210> SEQ ID NO: 4 185 <211> LENGTH: 183 186 <212> TYPE: PRT 187 <213> ORGANISM: Hepatitis B virus 189 <400> SEQUENCE: 4 191 Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu 195 Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp 20 25 199 Thr Ala Ala Ala Leu Tyr Arg Asp Ala Leu Glu Ser Pro Glu His Cys 200 40 203 Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Asp 55 207 Leu Met Thr Leu Ala Thr Trp Val Gly Thr Asn Leu Glu Asp Pro Ala 70 211 Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Val Gly Leu Lys 215 Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg 105 110 219 Glu Thr Val Leu Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr 115 120 125 223 Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro 130 135 140 227 Glu Thr Thr Val Val Arg Arg Gly Arg Ser Pro Arg Arg Thr 150 155 231 Pro Ser Pro Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Ser 165 170 235 Gln Ser Arg Glu Ser Gln Cys 236 180 239 <210> SEQ ID NO: 5 240 <211> LENGTH: 183 241 <212> TYPE: PRT 242 <213> ORGANISM: Marmota monax 244 <400> SEQUENCE: 5 246 Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ser Ser Tyr Gln Leu Leu 250 Asn Phe Leu Pro Leu Asp Phe Phe Pro Asp Leu Asn Ala Leu Val Asp 2.0 254 Thr Ala Thr Ala Leu Tyr Glu Glu Glu Leu Thr Gly Arg Glu His Cys 258 Ser Pro His His Thr Ala Ile Arg Gln Ala Leu Val Cys Trp Asp Glu 55 262 Leu Thr Lys Leu Ile Ala Trp Met Ser Ser Asn Ile Thr Ser Glu Gln 263 65 266 Val Arg Thr Ile Ile Val Asn His Val Asn Asp Thr Trp Gly Leu Lys





DATE: 03/13/2002 PATENT APPLICATION: US/10/082,014 TIME: 15:15:02

Input Set : A:\ICC130.ST25.txt

Output Set: N:\CRF3\03132002\J082014.raw

267					85					90					95	
270	Val	Arg	Gln	Ser	Leu	Trp	Phe	His	Leu	Ser	Cys	Leu	Thr	Phe	Gly	Gln
271				100					105					110		
274	His	Thr	Val	Gln	Glu	Phe	Leu	Val	Ser	Phe	Gly	Val	Trp	Ile	Arg	Thr
275			115					120					125			
278	Pro	Ala	Pro	Tyr	Arg	Pro	Pro	Asn	Ala	Pro	Ile	Leu	Ser	Thr	Leu	Pro
279		130					135					140				
282	Glu	His	Thr	Val	Ile	Arg	Arg	Arg	Gly	Gly	Ala	Arg	Ala	Ser	Arg	Ser
283	145					150					155					160
286	Pro	Arg	Arg	Arg	Thr	Pro	Ser	Pro	Arg	Arg	Arg	Arg	Ser	Gln	Ser	Pro
287					165					170					175	
290	Arg	Arg	Arg	Arg	Ser	Gln	Cys									
291				180												
	4 <210> SEQ ID NO: 6															
295	95 <211> LENGTH: 217															
		2> T														
297	<21	3> OI	RGAN	ISM:	Spe	rmopl	nilus	s va:	riega	atus						
		0> SI														
301	Met	Tyr	Leu	Phe	His	Leu	Cys	Leu	Val	Phe	Ala	Cys	Val	Pro	Cys	Pro
302					5					10					15	
	Thr	Val	Gln		Ser	Lys	Leu	Cys	Leu	Gly	Trp	Leu	${\tt Trp}$	Asp	Met	Asp
306				20					25					30		
	Ile	Asp		\mathtt{Tyr}	Lys	Glu	Phe	Gly	Ser	Ser	Tyr	Gln	Leu	Leu	Asn	Phe
310			35					40					45			
	Leu		Leu	Asp	Phe	Phe		Asp	Leu	Asn	Ala		Val	Asp	Thr	Ala
314		50					55					60				
		Ala	Leu	Tyr	Glu		Glu	Leu	Thr	Gly		Glu	His	Cys	Ser	
318			_	_	_	70		_			75					80
	His	His	Thr	Ala		Arg	GIn	Ala	Leu		Cys	Trp	Glu	Glu		Thr
322	_	_	- 1	_,	85		_		_	90					95	
	Arg	Leu	ITe		Trp	Met	Ser	Glu		Thr	Thr	Glu	Glu	Val	Arg	Arg
326	- 1	1		100	•		_	_	105	_		_	_	110		
	TTE	тте		Asp	H1S	vaı	Asn		Thr	Trp	GTA	Leu		Val	Arg	GIn
330	ml	-	115	5 1		-		120	_	1	-,	- 1	125		1	
	Thr		Trp	Pne	HIS	Leu		Cys	Leu	Thr	Phe		GLY	His	Thr	Val
334	a1	130	nl	T	**- 1	0	135	01	**- 1		-1.	140	m1	_		_
		GIU	Pne	Leu	Val		Pne	GIY	vaı	ттр		Arg	Thr	Pro	Ата	
338		7	D	D	3	150	D	T1-	T	a	155	T	D	01	** 1	160
	TAT	Arg	Pro	PLO		Ата	Pro	тте	Leu		Thr	Leu	Pro	Glu		Tnr
342	w-1	т1о	7 ~~	7	165	<i>c</i> 1	c1	Com	7	170	7 1 n	3	O	D	175	3
346	vaı	116	ALG	180	AIG	СТА	СТУ	ser	185	Ата	Ата	AIG	ser	Pro 190	Arg	Arg
	λrα	Thr	Dro		Dro	7 x a	λνα	7 200		Con	Cln	Cor	Dwo		7 ~~	7 mm
350	лту	TIIT	195	SET	FIO	лту	лту	200	мту	26T	GIII	ser	205	Arg	ита	AIG
	Δrσ	Ser		Ser	Dro	Δla	Sor		Cve				2 U J			
354	9	210	0111	DGT	110	пта	215	11011	Cys							
	<210	210)> SE	O TE	NO •	7		417									
		l> LE														
		2> TY			•											
	~ 4	11		2116												





PATENT APPLICATION: US/10/082,014

DATE: 03/13/2002 TIME: 15:15:03

Input Set : A:\ICC130.ST25.txt

Output Set: N:\CRF3\03132002\J082014.raw

```
360 <213> ORGANISM: Artificial Sequence
362 <220> FEATURE:
363 <223> OTHER INFORMATION: plasmid pkk223
365 <400> SEQUENCE: 7
366 ttcacacagg aaacagaatt cccggggatc cgtcgacctg cagccaagct t
                                                                             51
369 <210> SEQ ID NO: 8
370 <211> LENGTH: 38
371 <212> TYPE: DNA
372 <213> ORGANISM: Artificial Sequence
374 <220> FEATURE:
375 <223> OTHER INFORMATION: plasmid pkk223
377 <400> SEQUENCE: 8
                                                                             38
378 ttcacataaq qaqqaaaaaa ccatqqqatc cqaaqctt
381 <210> SEQ ID NO: 9
382 <211> LENGTH: 15
383 <212> TYPE: PRT
384 <213> ORGANISM: Streptococcus pneumoniae
386 <400> SEQUENCE: 9
388 Lys Leu Glu Glu Leu Ser Asp Lys Ile Asp Glu Leu Asp Ala Glu
                                         10
392 <210> SEQ ID NO: 10
393 <211> LENGTH: 35
394 <212> TYPE: PRT
395 <213> ORGANISM: Streptococcus pneumoniae
397 <400> SEQUENCE: 10
399 Gln Lys Lys Tyr Asp Glu Asp Gln Lys Lys Thr Glu Glu Lys Ala Ala
                                         10
403 Leu Glu Lys Ala Ala Ser Glu Glu Met Asp Lys Ala Val Ala Ala Val
                                     25
404
407 Gln Gln Ala
408
            35
411 <210> SEQ ID NO: 11
412 <211> LENGTH: 27
413 <212> TYPE: PRT
414 <213> ORGANISM: Cryptosporidium parvum
416 <400> SEQUENCE: 11
418 Gln Asp Lys Pro Ala Asp Ala Pro Ala Ala Glu Ala Pro Ala Ala Glu
422 Pro Ala Ala Gln Gln Asp Lys Pro Ala Asp Ala
                20
426 <210> SEQ ID NO: 12
427 <211> LENGTH: 17
428 <212> TYPE: PRT
429 <213> ORGANISM: Human immunodeficiency virus
431 <400> SEQUENCE: 12
433 Arg Lys Arg Ile His Ile Gly Pro Gly Arg Ala Phe Tyr Ile Thr Lys
434 1
                                         10
437 Asn
441 <210> SEQ ID NO: 13
```



Use of n and / or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to ensure a corresponding explanation is present in the <220> to <223> fields of each sequence using n or Xaa.





VERIFICATION SUMMARY

PATENT APPLICATION: US/10/082,014

DATE: 03/13/2002 TIME: 15:15:04

Input Set : A:\ICC130.ST25.txt

Output Set: N:\CRF3\03132002\J082014.raw

 $\hbox{L:9 M:270 C: Current Application Number differs, Replaced Current Application Number L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date }$

L:863 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 L:867 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32